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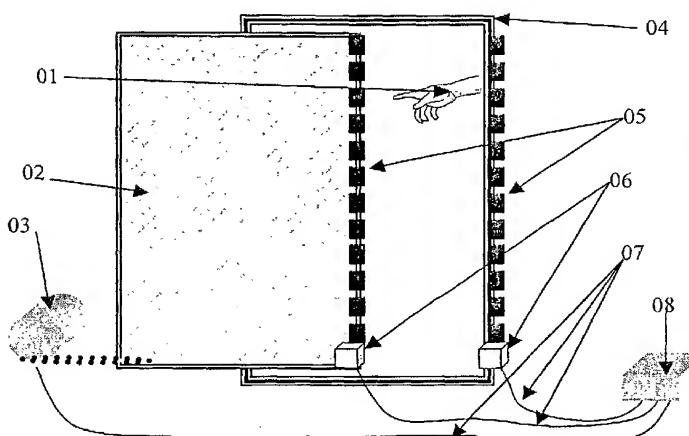
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A SEGMENTED CAPACITIVE CLOSURE OBSTRUCTION SENSOR



Trapped body part	[01]
Power closing panel	[02]
Motor and drive of power closing panel	[03]
Aperture (orifice)	[04]
Segment sensor	[05]
Sensor electronics	[06]
Wire harness	[07]
Control adaptor	[08]

(57) Abstract: The invention is a capacitive sensor system for preventing the pinching or trapping of a human body part or foreign object by a power-closing panel (02). The body part or object is sensed either before contact or at the time of contact with the sensor electrode by a change in capacitance. When the object or body part is detected, the power closing panels (02) can be reversed or stopped to prevent the trapping of the object. The sensing electrodes consist of multiple segments. Each segment detects the capacitance of the sensed object (with respect to ground or between adjacent or nearby elements) and the adjacent environment. The capacitance values for each of the segments are analyzed in real time and compared against the average of the highest value obtained from a certain number of segments. When the capacitance of one or more segments is less than the average of the capacitance of all or some of the segments minus a predetermined constant, the sensor system is triggered.

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : E05F 15/10; H02P 1/00, 3/00, 5/00, 7/00
 US CL : 318/256, 264, 434; 49/26, 28

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 U.S. : 318/256-258, 264-266, 268, 269, 272, 273, 275, 280-282, 434; 49/26, 28, 31, 33

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,091,217 A (PARSADAYAN) 18 July 2000 (18.07.2000), abstract, column 6, 36 through column 7, line 12; column 8, lines 42-60; column 10, lines 2-12 and lines 49-64	1, 2, 4-19
Y	UD 5,280,754 A (FLANAGAN ET AL.) 25 January 1994 (25.01.1994), abstract, figure 1, column 2 ,line 65 thfugh column 3, lin 37; column 4, lines 34-48; column 5, lines 6-46.	1, 2, 4-19
Y	US 4,706,227 A (DUVALL ET AL.) 10 November 1987 (10.11.1987), abstract, figure 1, column 2, lines 40-68; column 3, lines 1-28 and lines 47-62	1, 2, 4-19
Y	US 4,783,618 A (ARTRIP) 08 November 1988 (08.11.1988), abstract, column 2, line 24 through column 5, lines 3.	1, 2, 4-19

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	
"A"	document defining the general state of the art which is not considered to be of particular relevance
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"&"	document member of the same patent family

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